

Abstract

Shape memory alloy and elastically self-expanding endoluminal support structures which are at least partially encapsulated in a substantially monolithic expanded polytetrafluoroethylene ("ePTFE") covering. An endoluminal stent, which has a reduced diametric dimension for endoluminal delivery and a larger *in vivo* final diametric diameter, is encapsulated in an ePTFE covering which circumferentially covers both the luminal and abluminal walls along at least a portion of the longitudinal extent of the endoluminal stent. The shape memory endoluminal stent is fabricated from a shape memory alloy which exhibits either shape memory or pseudoelastic properties or from an elastic material having an inherent spring tension such as spring steel, braided stainless steel wire, or composite materials, such as woven or braided carbon fibers.